REMARKS

Upon entry of this Amendment, claims 1-14 remain in the application. Claims 15-20 have been withdrawn as being directed to a non-elected invention.

New claims 21-31 have been added by this action.

The Office Action of June 19, 2002 has been received and carefully considered. In response thereto, this Amendment is submitted. It is submitted that, by this Amendment, all bases of rejection and objection are traversed and overcome.

At the outset, the election to prosecution the invention of Group I, claims 1-14, is affirmed without traverse. Claims 15-20 now stand withdrawn as being directed to a non-elected invention.

Claims 1-14 currently stand rejected under 35 U.S.C. §102(b) as being anticipated by Iorio (U.S. Patent No. 5,520,223). The Examiner indicates that the Iorio reference discloses the recited metal layer tube comprising a metal tube 52, a zinc layer 54 bonded to the metal tube, where the zinc layer can be a zinc plating or alloys of zinc, a surface treatment layer 56 of chromate or phosphate, a priming layer 58 and a first and second polymeric layers 60, 62, where additional layers can be provided as desired and where the thicknesses of the materials claimed are disclosed in the reference including using an ionomer in Nylon 12.

The Applicants' invention is directed to a multi-layer tube having a metal tube with an outer surface and a zinc layer bonded to this surface. A surface treatment layer is bonded to the zinc layer and is selected from the group consisting of zinc/aluminum/rare earth alloy, phosphate, chromate and mixtures thereof. The multi-layer tube also includes a priming layer which is composed of a polymeric material capable of spray application. Overlying the priming layer is a first polymeric layer bonded to the priming layer. The first polymeric layer is selected from the group consisting of melt-processible thermoplastic elastomers, melt-processible ionomers, melt-processible nylons, melt-processible fluoropolymers, and mixtures thereof. A second polymeric layer is bonded to the first polymeric layer. The second polymeric layer is selected from the group consisting of melt-processible nylons, melt-processible thermoplastic elastomers, melt-processible fluoropolymers and mixtures thereof.

Support for these amendments is found generally in the specification at page 13, lines 20-29 and page 3, lines 8-13 (This discusses extrusion of multiple plastic layers onto a tube surface. Such material must, therefore, be melt-processible.) It is respectfully submitted that the Iorio reference lacks any teaching of a priming layer which is composed of a polymeric material capable of spray application. In contrast, the Iorio reference discusses the extrusion of multiple layers of plastic onto a metal surface with a first layer directly applied to the surface and is specifically silent as to spray application of materials or materials which are capable of such spray application. For these reasons, it is submitted that the Applicants' invention as set forth in claim 1 as amended is not taught, anticipated or rendered obvious by the Iorio reference.

Claims 2-9 also stand rejected under 35 U.S.C. §102(b) as being anticipated by the Iorio reference. Claims 2-9 depend from independent claim 1 to contain all of the limitations found therein. By this dependency, it is submitted that the Applicants' invention as set forth in claims 2-9 is not taught, anticipated or rendered obvious by the cited reference for the reasons discussed previously in conjunction with claim 1.

Claim 10 also stands rejected under 35 U.S.C. §102(b) as being anticipated by the Iorio reference. Claim 10 depends from claim 1 to specify that the first polymeric layer consists essentially of an ionomer and a nylon. This material is bonded to the priming layer composed of a polymeric material capable of spray application. It is submitted that the Iorio reference teaches a first polymeric layer composed of an ionomer and a nylon which is bonded directly to the surface treatment layer described in that reference. The reference fails to teach or suggest the interposition of a priming layer of the type disclosed and claimed in the present invention. For this reason, it is submitted that the Applicants' invention as set forth in claim 10 is not taught, anticipated or rendered obvious by the cited reference.

Additionally, claim 10 depends from independent claim 1 to contain all of the limitations found therein. By this dependency, it is submitted that the Applicants' invention as set forth in claim 10 is not taught, anticipated or rendered

obvious by the cited reference for the reasons discussed previously in conjunction with claim 1.

Claims 11-14 also stand rejected under 35 U.S.C. §102(b) as being rendered obvious by the Iorio reference. Claims 11-14 depend either directly or indirectly from claim 10 and, ultimately, from claim 1 to contain all of the limitations found therein. By this dependency, it is submitted that the Applicants' invention as set forth in claims 11-14 is not taught, anticipated or rendered obvious by the cited reference for the reasons discussed previously in conjunction with claims 1 and 10.

New claims 21 and 22 have been added by this action. Claims 21 and 22 each respectively depend from claim 1. Claim 21 specifies that the priming layer is a nylon spray coat having as a major constituent titanium dioxide. Claim 22 depends from claim 1 to specify that both the first and second layers comprise a low viscosity, low molecular weight Nylon 12 material. Support for claims 21 and 22 as now presented can be found in originally filed claims 19 and 20.

New claim 23 has also been presented which is directed to a multi-layer tube comprising a metal tube, a zinc layer, a surface treatment layer bonded to the zinc layer and a priming layer composed of a nylon compound having as a major constituent titanium dioxide. A first polymeric layer is bonded to the priming layer and a second polymeric layer is bonded to the first polymeric layer. Support for claim 23 is found in claim 1 as originally presented and in claim 19 as originally presented.

New claim 24 is also presented by this action. Support for new claim 24 is found in claim 2 as originally presented.

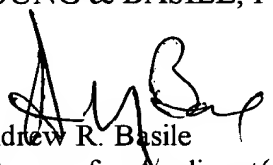
Support for new claims 25, 26, 27, 28 and 29 is found in claims 10, 11, 12, 13 and 14, respectively, as they have been originally presented. Support for new claim 30 is found in claim 20 as originally presented. Support for new claim 31 is found in the specification at page 3.

In summary, claim 1 has been amended. New claims 21-31 have been added by this action. Arguments and discussion have been presented as to why the Applicants' invention as set forth in the claims is not taught, anticipated or rendered obvious by the cited reference. In view of this Amendment and the associated discussion, it is submitted that the Applicants' invention as set forth in claims 1-14 and

21-31 is not taught, anticipated or rendered obvious. It is submitted that the Applicants' invention as set forth in these claims is in a condition suitable for allowance. Notice of allowance is, therefore, respectfully requested.

Respectfully submitted,

YOUNG & BASILE, P.C.



Andrew R. Basile
Attorney for Applicant(s)
Registration No. 24753
(248) 649-3333

3001 West Big Beaver Rd., Suite 624
Troy, Michigan 48084-3107

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VERSION OF CLAIM AMENDMENTS
WITH MARKINGS TO SHOW CHANGES MADE

1. (Amended) A multi-layer tube, comprising:

a metal tube having an outer surface;

a zinc layer bonded to the metal tube outer surface, wherein the zinc layer is selected from the group consisting of zinc plating, zinc nickel alloys, zinc cobalt alloys, zinc aluminum alloys, and mixtures thereof;

a surface treatment layer bonded to the zinc layer, wherein the surface treatment layer is selected from the group consisting of a zinc/aluminum/rare earth alloy, phosphate, chromate, and mixtures thereof;

a priming layer, wherein the priming layer is composed of a polymeric material capable of spray application;

a first polymeric layer bonded to the priming layer, wherein the first polymeric layer is selected from the group consisting of melt-processible thermoplastic elastomers, melt-processible ionomers, melt-processible nylons, fluoropolymers, and mixtures thereof; and

a second polymeric layer bonded to the first polymeric layer, wherein the second polymeric layer is selected from the group consisting of melt-processible nylons, melt-processible thermoplastic elastomers, melt-processible fluoropolymers, and mixtures thereof.

Claims 15-20 have been cancelled subject to Applicants' right to file a divisional application.

Claims 21-31 are new.